



2012 Toxics Use Reporting Instructions

(For reports due on
July 1, 2013
covering
calendar year 2012)



Developed in collaboration with the
Office of Technical Assistance and Technology
and the Toxics Use Reduction Institute

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WHAT'S NEW FOR CALENDAR YEAR 2012 REPORTS

CHEMICAL LIST CHANGES FOR Reporting Year 2012

Higer Hazard Substances, Two substances have been added to the higher hazard list effective reporting year 2012: formaldehyde (CAS # 50000) and hexavalent chromium compounds (category number 1216). As a result of this designation, the reporting threshold for these chemicals is now 1000 pounds. In addition, because hexvalent chromium compounds were split off from other chromium compounds, all non Hexavalent chromium compounds must be reported under the new MassDEP category number 1217. Finally, in RY 2012 state only form Rs must be completed for Formaldehyde, Hexavalent chromium and non Hexavalent chromium compounds, since TURA and TRI have different thresholds and/or qualifiers for these substances.

Chemicals newly reportable under TURA: The US EPA added 16 substances to toxics release inventory reporting effective reporting year 2011 reports. 12 of these substances are first subject to TURA reporting effective this year (RY 2012).

Nine are new individually listed chemicals:

1-Amino-2,4-dibromoanthraquinone	81-49-2
2,2-bis(Bromomethyl)-1,3-propanediol	32296-90-0
Glycidol	556-52-5
Methyleugenol	93-15-2
o-Nitroanisole	91-23-6
Nitromethane	75-52-5
Phenolphthalein	77-09-8
Tetrafluoroethylene	116-14-3
Vinyl Fluoride	75-02-5

Four chemicals were added to the Polycyclic Aromatic Compounds (PACs) category:

1,6-Dinitropyrene	42397-64-8
1,8-Dinitropyrene	42397-65-9
6-Nitrochrysene	7496-02-8
4-Nitropyrene	57835-92-4

The amounts of any of those substances should be added to any other PACs reported.

Three of the 16 substances have been TURA-reportable since the CERCLA list was added to TURA:

Furan	110-00-9
Isoprene	78-79-5
Tetranitromethane	509-14-8

ONLINE TURA REPORTING

Facilities are urged to file online via the eDEP system. More than 95% of TURA facilities do so.

Advantages

- ✓ Complete forms more quickly and easily, as many data fields will fill themselves in or pre-populate based on prior years' submittals.
- ✓ The system completes the Fee Worksheet automatically.
- ✓ Avoid improperly completed forms through data entry controls.
- ✓ No paper forms have to be submitted.

Easy to Set up

If you filed under TURA before, register online with eDEP at www.mass.gov/dep and click on eDEP Online filing. It takes about 15 minutes to sign up online and receive confirmation by email. To register you will need your MassDEP Facility ID# and TAX ID# (FEIN/TIN). Please contact MassDEP-TURA at 617-292-5982 if you need to obtain your ID numbers.

Note to first-time filers: There are special procedures for facilities reporting for the first time. Just submit a Form S Cover Sheet (paper copy) in advance and DEP will set things up so you have access to the eDEP system. In this case, please contact Walter Hope of MassDEP at 617-292-5982 to make arrangements to enable electronic TURA filing.

Requirements

- ✓ You need a computer and connection to the Internet.
- ✓ Microsoft Windows NT 4.0, 2000, XP, or Windows 7 (Vista is not supported)
Microsoft Internet Explorer Version 5.0 and higher or Netscape Navigator Version 7.0 and higher
- ✓ **Windows PC users should use the latest version of the [FREE Adobe Reader](#).** Many versions of Adobe Reader for the PC (including 5.0.0, 6.0.0, 7.0.0 and 9.3.2.0) **are not compatible** with the improved eDEP software because of known bugs in Adobe's Reader. Also, Adobe releases newer versions to patch problems in the older software. So we
- ✓ Recommend upgrading before you start working on your forms.
- ✓ **IMPORTANT:** you must uninstall previous versions of Adobe reader on the PC before you upgrade to the latest version. Adobe versions 5.x and 6.x frequently fail to completely uninstall themselves. You will recognize this by the fact that directories for Acrobat 5 or Acrobat 6 remain in the Adobe subdirectory of your C:\Program Files directory. It may be necessary to manually remove these older directories after deinstalling the old reader through Windows Control Panel. Again, note that you will need to completely deinstall the old reader first before installing the new version to avoid conflicts between the 2 versions. If you are not able to load your forms, it is very likely an Adobe reader conflict problem based on our Help Desk experience. For **Help Desk assistance**, email helpdesk.eea@massmail.state.ma.us or call 617-626-1111. The Help Desk is available during business hours only.

INFORMATION REGARDING FILING TOXICS RELEASE INVENTORY (TRI) FORM RS

If you submit Federal TRI Form Rs to EPA via the TRI-ME web, those forms are sent directly to the Department via EPA's Central Data Exchange (CDX). Using the TRI-ME system fulfills the TURA Form R filing requirement.

You must still submit TRI Form Rs to MassDEP IF your facility:

- Submits Federal TRI Form Rs to EPA via paper
- Is a first time TRI filer
- Is required to submit a "State-Only Form R" to MassDEP. State-Only Form Rs are required when the facility:
 - Is in an industrial sector (NAIC code) that is covered by TURA but not the Federal TRI program.
 - Uses a chemical that is covered by TURA but not the Federal TRI program. (Remember to submit a separate Federal Form R to the EPA TRI program.)
 - Uses a chemical that is covered by both TURA and the Federal TRI but where the qualifiers differ. (Remember to submit a separate Federal Form R to the EPA TRI program.)
 - Uses a TURA "higher hazard" chemical in an amount greater than the TURA reporting threshold, but less than the Federal reporting threshold. (The TURA threshold for higher hazard chemicals is 1000 pounds.)

LIST OF CHEMICALS FOR WHICH A STATE ONLY FORM R/A WILL BE AUTOMATICALLY GENERATED		
CAS	name	Category Explanation
1004	Cadmium Compounds	Higher hazard as of reports covering CY2008
1216	Chromium Compounds – Hexavalent only	Higher hazard as of reports covering CY2012
1217	Chromium Compounds – non hexavalent	TURA has qualifiers that EPA TRI 313 lacks – TURA covers only non Hexavalent chromium compounds
5000	Formaldehyde /methylene oxide	Higher hazard as of reports covering CY2012
79016	Trichloroethylene	Higher hazard as of reports covering CY2008
123319	Hydroquinone	TURA has qualifiers EPA TRI 313 lacks – TURA covers amount manufactured only as of reports covering CY2002
127184	Perchloroethylene /Tetrachloroethylene	TURA Higher hazard as of reports covering CY2009
7439965	Manganese	TURA has qualifiers EPA TRI 313 lacks – TURA covers only the pure metal and aerosol alloys as of reports covering CY1995
7440020	Nickel	TURA has qualifiers EPA TRI 313 lacks – TURA covers only pure form and aerosol alloys as of reports covering CY1995
7440224	Silver	TURA has qualifiers TRI 313 lacks - report only if copper alloy aerosol as of reports covering CY2002
7440439	Cadmium	TURA Higher hazard as of reports covering CY2008
7440473	Chromium	TURA has qualifiers EPA TRI 313 lacks – TURA covers only pure form and aerosol alloys as of reports covering CY1995
7440484	Cobalt	TURA has qualifiers EPA TRI 313 lacks – TURA covers only pure form and aerosol alloys as of reports covering CY1995
7440666	Zinc	EPA TRI 313 has qualifiers that AT TURA lacks –TURA covers all forms

LIST OF CHEMICALS FOR WHICH A STATE ONLY FORM R/A WILL BE AUTOMATICALLY GENERATED		
CAS	name	Category Explanation
7647010	Hydrochloric acid	EPA TRI 313 has qualifiers that AT TURA lacks –TURA covers all forms
7664939	Sulfuric acid	EPA TRI 313 has qualifiers that AT TURA lacks –TURA covers all forms
7723140	Phosphorus	EPA TRI 313 has qualifiers that AT TURA lacks –TURA covers all forms
8014957	Oleum (fuming sulfuric acid, sulfuric acid mixture with sulfur trioxide)	EPA TRI 313 has qualifiers that AT TURA lacks –TURA covers all forms
65357622	Copper	TURA has qualifiers TRI 313 lacks – TURA covers only if in silver alloy aerosol as of reports covering CY2002

If you are using eDEP and one of the factors listed above applies, a State only Form R (or A) will be automatically presented to you on line. If you are submitting a paper TURA report, then you must fill out the Federal TRI form and submit it along with your Form S. If the substance is also reportable under TRI you will need to file a separate TRI form with EPA.

ONLINE PAYMENT OPTION FOR TOXICS USE FEE

Facilities that file their toxics use report via eDEP have two options for making toxics use fee payments:

1. Pay electronically at the time of filing by providing bank account information (select “ACH” in eDEP); or
2. (select “CHECK” in eDEP and enter the check number and then mail the check and a copy of the fee worksheet to MassDEP by September 1, 2013. Mail checks to: MassDEP, P.O. Box 4062, Boston, MA 02211.

Note that there is **no billing option**. Giving facilities the ability to pay toxics use fees at the time of filing (either electronically or by providing a check number and then mailing a check) allows them to complete the reporting process without waiting for a future bill and minimizes transaction costs for both facilities and MassDEP. Facilities that do not submit their toxics use fee by September 1, 2013 will be subject to a \$1,000 late fee, regardless of which payment option is chosen.

NEED ADDITIONAL INFORMATION ON EDEP TURA REPORTING?

- ✓ Contact Walter Hope at MassDEP (617) 292-5982 or Walter.Hope@state.ma.us

Chapter 1

GUIDE TO COMPLETING THE TOXICS USE REPORT

Introduction

The Toxics Use Reduction Act (TURA) requires that large quantity users of toxic materials:

1. report annually on their use of toxic materials and pay a toxics use fee; and
2. engage every other year in a planning process designed to help uncover opportunities to reduce their use and waste of toxic chemicals as water, energy or materials use. As an alternative, the company may implement an environmental management system provided the EMS addresses toxics. Resource conservation planning is allowed every other planning cycle.

Under TURA, the preferred means of reducing toxic chemical use and toxic wastes is "toxics use reduction" (TUR). TUR can be achieved by a variety of means, including input substitution (or replacing chemicals used in production), redesigning or modernizing production processes, improving storage and handling practices, training employees in more efficient production techniques, and in-process reuse or recycling.

Across Massachusetts, many facilities have found that TUR has helped them improve production efficiency, cut chemical purchase costs, and improve worker health and safety. Along with those benefits, facilities are reducing the risk of chemical releases to the environment in a cost-effective way.

The key to identifying TUR opportunities is having a clear idea of what chemicals are being used, how and why they are being used, and in knowing what wastes are being produced. One of the main purposes of TURA reporting is to gather this information.

These instructions include tips for how to avoid some common mistakes. Those mistakes are highlighted throughout the instructions as well as in **Appendix D**. Examples are provided to help clarify potentially confusing issues.

Who Must File the Calendar Year 2012 Toxics Use Report?

A facility is required to file the 2012 Toxics Use Report if it:

1. **was a Large Quantity Toxics User (LQTU)**, that is, the facility manufactured, processed or otherwise used a TURA-regulated chemical in excess of a reporting threshold in 2012. (Reporting thresholds are listed below. See Appendix J for definitions of manufactured, processed, and otherwise used.)
2. **employed the equivalent of at least 10 full-time employees (FTEs) in 2012** (see Appendix J and EPA's "Toxic Chemical Release Inventory Reporting Forms and Instructions for RY 2012" for a full definition); AND
3. **conducted any business in any of the activities described by the North American Industrial Classification System Codes (NAICS) which correspond to Standard Industrial Classification (SIC) codes 10 - 14, 20 - 39, 40, 44 - 51, 72, 73, 75 and 76** (see Appendix A for a cross-reference from SIC to NAICS codes); AND

All three criteria must be met before a facility is required to file under TURA. If one of the above statements is not true, a facility is not required to file under TURA (see page 10 of these instructions if your facility reported previously but is exempt this year).

What Are The Contents Of A Toxics Use Report?

The annual toxics use report contains information about toxics use and waste during the previous calendar year.

A complete toxics use report includes the following:

- ✓ TURA Form S Cover Sheet
- ✓ A Federal or State-only Toxics Release Inventory (TRI) Form R or Form A for each chemical
Note: unless a state only Form R is required (as explained below), submitting a federal form R to the EPA TRI ME electronic system fulfills this component of the TUR report. If you do not file your Federal TRI Form R electronically you must submit a paper copy to MassDEP as well as to EPA.
- ✓ TURA Form S for each chemical
- ✓ TURA Fee worksheet

TURA reporting supplements federal annual Toxic Release Inventory (TRI) reporting to the U.S. Environmental Protection Agency (EPA) under Section 313 of the federal Emergency Planning and Community Right to Know Act (EPCRA).

Many of TURA's reporting definitions and concepts are the same as those of EPCRA. You will need to obtain the EPA "Toxic Chemical Release Inventory Reporting Forms and Instructions for RY 2012" to complete a Massachusetts toxics use report. The TRI forms and instructions can be found at <http://www.epa.gov/tri/report/index.htm>. EPA also maintains an EPCRA hotline which can answer questions about EPCRA or supply the Form R. The hotline number is 800-424-9346, or you can visit the EPA web site at www.epa.gov/tri

What Toxic Substances Are Subject To TURA Reporting?

The Massachusetts Toxics Use Reduction Act List of Reportable Chemicals for Calendar Year 2012 the chemicals that are subject to TURA reporting requirements for calendar year 2012. This list can be found in Appendix B of these instructions and at <http://www.mass.gov/dep/toxics/tura/reportsum.htm#chemicalslists>. The list is comprised of substances on the:

- EPCRA Toxics Release Inventory (TRI) list
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") List
-

as modified by regulations adopted by the TURA Administrative Council to delist or add substances.

EPA's "Toxic Chemical Release Inventory Reporting Forms and Instructions for RY 2012" provides in-depth definitions and guidance for determining whether your facility meets any of the federal reporting thresholds.

What Are The Threshold Quantities For Reporting?

The threshold amounts for a facility to be a Large Quantity Toxics User (LQTU) are:

- **25,000** pounds for a toxic substance that was **manufactured** or **processed** during the reporting year; or
- **10,000** pounds for a toxic substance that was **otherwise used** during the reporting year;
- **1,000** pounds for a higher hazard substance
 - Trichloroethylene
 - Cadmium
 - Cadmium compounds
 - Perchloroethylene /Tetrachloroethylene
 - Formaldehyde /Methylene oxide
 - Hexavalent Chromium Compounds; or
- **For PBT chemicals, 100 lbs, 10 lbs, or 0.1 gram**, depending on the specific PBT chemical. The table below lists the PBT chemicals and their specific reporting thresholds.

PBT Chemical and Chemical Category Reporting Thresholds

Chemical Name or Chemical Category Name	CAS Number or Mass DEP Chemical Category Code	Threshold (pounds, unless otherwise noted)
Aldrin	309-00-2	100
Benzo(g,h,i)perylene	191-24-2	10
Chlordane	57-74-9	10
Dioxin and dioxin-like compounds (manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacturing of that chemical)	1060	0.1 gram
Heptachlor	76-44-8	10
Hexachlorobenzene	118-74-1	10
Isodrin	465-73-6	10
Lead (this lower threshold does not apply to lead when contained in stainless steel, brass or bronze alloy)	7439-92-1	100
Lead compounds	1026	100
Mercury	7439-97-6	10
Mercury Compounds	1028	10
Methoxychlor	72-43-5	100
Octachlorostyrene	29082-74-4	10
Pendimethalin	40487-42-1	100
Pentachlorobenzene	608-93-5	10
Polychlorinated biphenyls (PCBs)	1336-36-3	10
Polycyclic aromatic compounds (PACs)	1040	100
Tetrabromobisphenol A	79-94-7	100
Toxaphene	8001-35-2	10
Trifluralin	1582-09-8	100

Under What Circumstances are State-Only Forms R/A Required?


TURA regulates more chemicals than EPCRA, has qualifiers that differ than EPA's for certain chemicals, has lower reporting thresholds for chemicals that have been designated "higher hazard" and covers a broader range of NAICS

codes. As a result, some facilities have TURA-only reporting obligations that are either not required under EPCRA, or are different than what is required under EPCRA. You must submit a State-Only Form R/A, in these instances. The chemicals that are affected are listed below.

LIST OF CHEMICALS FOR WHICH A STATE ONLY FORM R/A IS REQUIRED		
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1216	Chromium Compounds – Hexavalent only	Higher hazard as of reports covering CY2012
1217	Chromium Compounds – non hexavalent	TURA has qualifiers that EPA TRI 313 lacks – TURA covers only non Hexavalent chromium compounds
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eDEP will automatically present you with a required State-Only Form R/A, if you are filling out your forms online. If you are submitting a paper report, you must go to the Federal TRI website <http://www.epa.gov/tri/report/index.htm> and print out a copy of the form.

Since the State-Only Form R/A asks for the same data as the federal Form R, refer to EPA's *Toxic Chemical Release Inventory Reporting Forms and Instructions* <http://www.epa.gov/tri/report/index.htm>, when filling it out.


 **Note:** Do not send State-Only Form R/As to EPA, however remember to submit a separate Federal Form R/A to EPA if one is required. .

When Can I File A Form A (Federal or State-Only) Instead Of A Form R?

Unless the chemical is a pBT or a high hazard TUR the simplified Form A may be used instead of a Form R provided:

- ✓ the amount of the chemical manufactured, processed, or otherwise used does not exceed one million pounds
 - ✓
 - ✓ the annual reportable amount at a facility does not exceed 500 pounds chemical
- The reportable amount is the combined total quantities released at the facility, disposed within the facility, treated at the facility (as represented by amounts destroyed or converted by treatment processes), recovered at the facility as a result of recycle operations, combusted for the purpose of energy recovery at the facility, and amounts transferred from the facility to off-site locations for the purpose of recycle, energy recovery, treatment, and/or disposal. These amounts are reported in sections 8.1 (quantity released), 8.2 (quantity used for energy recovery on-site), 8.3 (quantity used for energy recovery off-site), 8.4 (quantity recycled on-site), 8.5 (quantity recycled off-site), 8.6 (quantity treated on-site), and 8.7 (quantity treated off-site)
- ✓

See EPA's *Toxic Chemical Release Inventory Reporting Form and Instructions* for additional guidance on eligibility for Form A reporting.

 **Note:** Form As are not permitted for PBT and High Hazard chemicals.

If you are filing a Form A to meet TURA-only reporting requirements fill in just the Form A section of the State-Only Form R/A.

What Are The Exemptions to TURA Reporting?

Some of the exemptions to TURA reporting are the same as those under EPCRA. These include exemptions for certain chemical uses, the de minimis exemption (the de minimis exemption does not apply to PBTs) and the article exemption. These exemptions are summarized below. (Please refer to EPA's TRI Forms and Instructions for more detail on when an exemption applies.

Full Exemptions:

1. Exempt Uses

A regulated chemical is exempt when it is **otherwise used** in:

- ☐ Janitorial or grounds maintenance
- ☐ Maintenance of motor vehicles operated by a facility
- ☐ Structural components of a facility
- ☐ Personal items (office supplies, food, drugs, cosmetics, etc.)
- ☐ Intake air or water

The facility maintenance and structural components exemptions DO NOT apply to chemicals used in association with process equipment.

2. De Minimis Exemption

The de minimis exemption allows facilities to disregard certain minimal concentrations of a regulated chemical found in mixtures or trade name products. Under EPA's rules, the chemical must be processed or otherwise used. The de minimis quantity levels are:

- ☐ < 0.1% by weight for OSHA carcinogens
- ☐ < 1% by weight for other chemicals

The exemption DOES NOT apply to chemicals that are manufactured, intentionally or coincidentally, by the facility. The de minimis exemption DOES NOT apply to PBTs.

3. Article Exemption


Listed chemicals in an “article” are exempt if the item meets certain criteria. The article must be a manufactured item which:


- ☐ is formed to a specific shape or design during manufacture;
- ☐ has end use functions dependent in whole or in part on its shape or design; and
- ☐ does not release a listed chemical under normal processing or otherwise use.

The exemption only applies to articles that are processed or otherwise used. For example, a firm that buys and attaches metal arms to chairs could be eligible for the exemption. The firm that manufactured the arms generally would not be eligible. Also, to qualify for the exemption, the article must retain its initial thickness or diameter.

4. Chemicals used in laboratories under the direction of a technically qualified individual as defined under the federal EPCRA program (40CFR Part 372.38(d) and 40 CFR part 720.3(ee) Exemption

Chemicals used in laboratories are not counted toward facility wide and TUR reports do not need to cover the manufacture, process or otherwise use of a chemical in a laboratory.

 **Note:** the laboratory exemption does NOT apply to Specialty Chemical Production, manufacture processing or use of toxic substances in pilot plant scale operations or activities conducted outside the laboratory

 **Note:** Reporting is required on all non laboratory uses of that chemical if it is used in those processes above the threshold


Partial Exceptions: Facility Wide Reporting Only

TUR reports include both facility wide and production unit level information. Only facility wide reporting (amount manufactured, processed, otherwise used, shipped in product, generated as byproduct and TRI information) is required in the following circumstances:

- **Waste Treatment Chemicals:** If a chemical is used solely for the purpose of waste treatment, that chemical use is counted toward the reporting threshold and use and byproduct amounts must be included on the facility wide information portion of Form S. Production unit level reporting is not required for chemicals used in waste treatment. Note that, production unit level reporting IS required for those non waste treatment processes in which the chemical is used at the facility.
- **Pilot Plants:** The explanation for chemicals used in wastewater treatment also applies to chemicals used in pilot plants
- **Start up Production Units:** The explanation for chemicals used waste treatment also applies to chemicals used in start up production units. Note though that the exemption for production unit level reporting and planning only applies for the shorter of the time it takes to get the production working at the desired efficiency or two years from initial operation.

What If We Reported Last Year But Are Exempt This Year?

If your facility does not have to report this year but reported in a previous year, MassDEP recommends that you notify MassDEP in writing and explain why. This will help MassDEP distinguish facilities that are exempt from those that are out of compliance.

 **Note:** You are encouraged complete the toxics use report Form S Cover Sheet (Section 3) if your facility is newly exempt from reporting (see p. 14 of this guidance). Alternatively you may send a letter to MassDEP explaining why your facility is newly exempt.

Easy Online Tura Filings

MassDEP has enhanced online filing of toxics use reports via the internet. Features that are specific to eDEP filing are indicated in these directions by the flag symbol

🚩. For more information about reporting and online filing in general go to :

www.mass.gov/dep/ and

- 1) click on the “toxics and Hazards” link in the gray box on the left (under Massachusetts Department of Environmental Protection heading), and then
- 2) click on the link to Toxics Use Reduction Act Forms and Online Reporting in the center of the page under the “Most Requested” heading. _

🚩 Many of the fields in the eDEP TURA forms will pre-fill themselves based on previous TURA submissions (if applicable), and on other existing databases.

Note: NEED HELP WITH REPORTING?

If you have general questions about the contents of the report contact: Lynn Cain at 617-292-5711 or Cynthia Chaves at 617-292-5848 at MassDEP. If you need help with eDEP contact Walter Hope at 617-292-5982

How Do I File Federal TRI Form Rs with MassDEP to Comply with EPCRA and TURA?

EPCRA requires that facilities file federal Form Rs with the state as well as with EPA. TURA also requires that facilities include Form Rs in the toxics use report. Facilities can meet both requirements by filing with EPA a federal Form R using TRI-MEweb for each chemical reported. MassDEP will receive federal Form Rs directly from EPA via EPA’s Central Data Exchange (CDX). Therefore, if your facility files Forms Rs with EPA using TRI-ME do not file another copy with of your federal Form Rs with MassDEP. For more detailed instructions on how to fill out the Form R, please refer to EPA’s *Toxic Chemical Release Inventory Reporting Forms and Instructions* available at www.epa.gov/tri/report/index.htm.

Facilities need to file Form Rs with both MassDEP and EPA under the following circumstances.

- Facilities that file federal Form Rs via paper
- First-time TRI filers must submit paper Form Rs to MassDEP.
- Facilities that are reporting on chemicals with qualifiers or thresholds that are not the same under TURA and Federal TRI.

Note that facilities in industrial sectors or filing for chemicals that are not covered by TRI must file State-Only Forms R/As with MassDEP but are not required to submit a Form R to EPA..

Note too, that the eDEP system will automatically present state only Form Rs/As when they are required.

When Are the Toxics Use Reports Due?

The toxics use reports (are due – either filed online or postmarked) by **July 1 of the year after the reporting year.** (For example, for reporting year 2010 which covers toxic use in calendar year 2010 was due by July 1, 2011)

Please note that filing a late toxics use report may result in MassDEP enforcement action, and if the report is more than 30 days late, section 19, subpart F of the TURA statute requires MassDEP to impose an administrative fee of \$1,000 per chemical.

 **Note:** If you are filing on paper rather than via eDEP, send the report to:

**Attn:Walter Hope
TURA Program
MassDEP
1 Winter Street -7th Floor
Boston, MA 02108**

Please do NOT send toxics use reports to MassDEP's regional offices.

When Is the Toxics Use Fee Due?

The toxics use report includes a fee worksheet that must be completed and filed with your toxics use report due by July 1 of the year after the reporting year. There are two options for making payment. At the time of eDEP filing you can:

1. Pay electronically by providing bank account information, or
2. Provide a check number and then mail the check with a copy of the fee worksheet to MassDEP by September 1, 2013. Mail checks to: MassDEP, P.O. Box 4062, Boston, MA 02211

MassDEP strongly encourages on-time payment of fees. Section 19, subpart F of the TURA statute assesses an administrative fee of \$1,000 for any toxics use report that is filed more than 30 days late, and for any toxics use fee that is not paid on time. Facilities that do not submit their toxics use fee by September 1, 2013 will be automatically subject to an additional \$1,000 late fee.

What If I Have a Financial Hardship?

In cases of severe financial hardship, a toxics user who employs less than 100 full-time employees may apply to MassDEP for a waiver of the toxics use fee for the year.

MassDEP may waive the fee, in whole or in part, or may extend the time for payment or partial payment.

A toxics user who employs more than 100 full time equivalent employees (FTEs) may apply to MassDEP for a payment plan. (FTEs are calculated by totaling the hours worked including paid leave by all employees and contractors (be they full or part-time) at the site during the reporting year, and dividing that sum by 2,000

Applications for fee waivers or payment plans are due on July 1 with the report for which a request is being made..


To request an application for a fee waiver or payment plan write to the TURA Program address listed above, Attn: Walter Hope, TURA Fee Waiver Request

How Can I Correct A Previously Filed Report?

If you would like to correct an error in a previously filed report:

1. Photocopy the page which contains the information to be corrected;
2. Clearly identify at the top of the page the year of the report that you are correcting;
3. Write the corrected information next to the erroneous data element;
4. Clearly identify the new information by circling it in red ink; and
5. Have the facility official who certified the report initial and date the change at the top of the page.

If the person who originally certified the report has left the facility or is unavailable, have the senior management official who currently signs toxics use reports initial and date the change.

 **Note:** Send corrections to the TURA Program address above Attn: Walter Hope, TURA Report Corrections

✓Example

Section 1: Facility-Wide Use of Listed Chemical

1026	Lead Compounds
a. CAS #	b. Chemical Name (Dioxin should be in grams, decimal points may be used)
Facility-wide use of chemical identified in a. Enter the total amount (in POUNDS, except for dioxin) for each applicable category. NOTE: 'Generated as byproduct' (item f.) means all waste containing the listed chemical before the waste is handled, transferred, treated, recycled or released. Please refer to the reporting instructions before completing this section.	
c. Manufactured	100,000 66,650 R.W. 6/10/11
d. Processed	650
e. Otherwise Used	f. Generated As Byproduct
66,000	h. <input type="checkbox"/> Check here to input Form R or A information to MassDEP
g. Shipped In Or As Product	

Chapter 2

DETAILED FORM S COVER SHEET INSTRUCTIONS


The Form S Cover Sheet is divided into four sections.

In Section 1 facilities provide general information and state whether or not they are making any Trade Secret claims. eDEP pre-populates this section for facilities that are filing electronically.

In Section 2 a senior management official certifies that the information contained in the toxics use report is true, accurate, and complete. This section must be completed last.

In Section 3 facilities may elect to provide information about any chemical reported last year that is not being reported this year, including the reasons why.

In Section 4 facilities provide a facility-wide listing of production units and production process codes. eDEP pre-populates this section for facilities that filed in prior years. First time eDEP filers will need to complete portions of this section.

 **Note for manual filers:** Fill in the reporting year, facility name, and MassDEP facility ID number in the top right corner of each page. Filling out this information ensures that your submittal stays together. If you are filling out the forms on the web, these items will pre-populate

Completing Section 1 of the Cover Sheet: General Information

✓Example

Section 1: General Information

Facility Name and Address:

Jane Smith

a. Name

211 Main Street

b. Street Address

Anytown

c. City

MA

d. State

02100


e. Zip Code

- f. Are you making a trade secret claim for any information submitted in this COVER SHEET and/or Form S(s)? Yes ☐ No ☒
- g. If YES, attach a statement substantiating the claim. This copy is: Sanitized ☐ Unsanitized ☒
- h. Are all chemicals only used to treat wastewater? Yes ☐ No ☒
(if yes, then there are no production units associated with this facility).

i. Taxpayer Identification Number
(Federal Employer Identification Number or FEIN)

j. Toxics Release Inventory (TRI) Identification Number

Explanation of Section 1, Items a-through e.

 **Note:** These sections will all be pre-populated for eDEP filers.

Facility Name and Address: Write in the facility name and address. When you write your facility name, put the facility name first, then any division, if applicable. For example: "ACME Electronics, Aerospace Division". Do not leave this section blank.

Explanation of Section 1, Item f

Trade Secret Claim: You may **not** withhold information from MassDEP because it is confidential. You may, however, request that the agency keep the information Trade Secret. MassDEP must determine whether or not a claim of Trade Secret meets the standards for Trade Secret protection.

Read the Trade Secret regulations (310 CMR 3.00) carefully before you make a claim. There are penalties for frivolous claims.


If you are claiming a Trade Secret, please call MassDEP at (617) 556-1011 to receive a special reporting package.

Explanation of Section 1, Items g through h

Sanitized or Unsanitized Versions of the TUR Report: Filers claiming that certain data elements are trade secrets must file two versions of the TURA Report. The "sanitized" version excludes the trade secret information. The trade secret information is included in the "unsanitized" version of the report

Waste Treatment Chemicals: State whether or not the chemical is only used in waste treatment. You do not need to assign a production unit number for waste treatment chemicals. In section 4 of the cover sheet, list this operation as "dummy" and chose N/A as the unit of product.

Explanation of Section 1, Items i through j

 **Note:** These sections will all be pre-populated for eDEP filers.

Taxpayer Identification Number: Enter your facility's Federal Employee Identification Number or FEIN.

Toxics Use Release Inventory (TRI) ID Number: Enter your facility's federal TRI number.

Completing Section 2 of the Cover Sheet: Certification Statement

✓ Example

Sign this CERTIFICATION STATEMENT after all of the pages of the Form S Cover Sheet have been completed.

I hereby certify that I have reviewed this and all attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and information in these documents are accurate based on measurements and/or reasonable estimates using data available to the preparers of these documents. I am aware that there are significant penalties for willful or intentional submission of false or incomplete information. I agree on behalf of the filing facility to remit the required Toxics Use Fee (as determined on the Fee Worksheet form) to the Commonwealth of Massachusetts as required by 301 CMR 40.03. I further certify that the information contained within this filing is true and accurate pertaining to TURA billing information.

John Doe

a. Authorized Signature

John

c. First Name (print)

Plant Manger

e. Position/Title

5/25/20112011

b. Date (mm/dd/yyyy)

Doe

d. Last Name (print)

johndoe@xyz.com

f. Email Address

💡 Reporting Guidance

If you are filling out these forms via eDEP all certification statements, regardless of where they are located in the forms, must be signed at the very end of the submittal.

If you are filling out these forms on paper, do not complete Section 2 until all of the required forms are present, complete, and accurate.

The certification statement must be signed by a "senior management official," that is, by an official who has management responsibility for the person(s) completing the report, and who has the authority to act as an agent for the facility.

Completing Section 3 of the Cover Sheet: Chemicals Previously Reported That Are Not Reportable This Year

Complete Section 3 to indicate that a chemical was not inadvertently omitted from reporting and that the facility should not be subject to enforcement for failure to report the chemical. The information on substituted chemicals also will help MassDEP, Office of Technical Assistance (OTA) and the Toxics Use Reduction Institute (TURI) with their industry outreach, technical assistance, and research and development efforts.

✓ Example

In this section, you may provide information on any chemical reported last year that is not subject to reporting this year. If you substituted a non-listed chemical for a TURA chemical, you may identify the substitution.

The codes to explain why the chemical is not reportable are: [1] Chemical Below Threshold But > 0; [2] No Chemical Use in Reporting Year; [3] Chemical Substitution; [4] Chemical Eliminated (No Substitution); [5] Decline in Business; [6] Other (Explain below in the additional comments section). Check all the codes, up to four, that apply.

a.1	7439965	a.2	Manganese
	CAS # of chemical not reportable (if applicable)		Chemical Name
a.3.	Explanation of why the chemical is not reportable (check codes):	<input type="checkbox"/> [1]	<input type="checkbox"/> [2]
		<input type="checkbox"/> [3]	<input checked="" type="checkbox"/> [4]
		<input type="checkbox"/> [5]	<input type="checkbox"/> [6]
a.4		a.5	
	CAS # of chemical substituted for TURA chemical		Chemical Name


Explanation of Section 3, Items a.1 through a.3

From year to year, some facilities may find that they do not have to report a chemical previously reported. In this section identify each such chemical and explain why it is not being reported this year, using the codes provided. Enter as many codes as apply.

 **Note:** eDEP submittals will allow only valid MassDEP listed chemicals to be reported as ‘chemicals not reportable’.


Explanation of Section 3, Items a.4 through a.5

If a chemical is not being reported because another chemical was substituted for it, identify the substituted chemical. The form allows you to identify two such chemical substitutions. If you have additional substitutions, provide the relevant information on a separate sheet of paper.

 **Note** CAS #s are entered without dashes.

Completing Section 4 of the Cover Sheet: Facility-Wide Listing of Production Units

Section 4 describes each of the production units used at the facility. A production unit is a combination of the process or activities used to produce a product or a service AND the product or service. Facilities must have at least one production unit, but can have any number they choose. The only exception is for facilities that are only required to report on chemicals used for the sole purpose of waste treatment. In that case they enter “dummy” for the production unit. Do not give this “dummy” a production unit number.

 **Note:** These sections will be pre-populated for prior year eDEP filers.

 **Note:** There is one form for each production unit.

✓ Example

A PRODUCTION UNIT is best thought of as the combination of the process (or activities) used to produce a product or service and the product or service. In this section, please identify the PRODUCTION UNITS at the facility, then use the production unit number to report on chemical use in the Form S.

If there has been a substantial change in a PRODUCTION UNIT from the previous reporting year, the PRODUCTION UNIT must be given a new, unique number.

a. Production Unit #	b. Describe the Process:
	<u>Aluminum processing – electropolishing and plating of aluminum parts</u>
Is this production unit IN USE for the reporting year of this submittal?	
	c. Describe the Product:
	<u>Aluminum parts ready for further processing</u>

Enter up to four (4) six-digit NAICS Codes that best describe the Product from this Production Unit:

<u>332813</u>			
d. NAICS Code	e. NAICS Code	f. NAICS Code	g. NAICS Code

h. Check the appropriate description for the unit of product:

<input type="checkbox"/> area	<input type="checkbox"/> dollar	<input type="checkbox"/> hours	<input type="checkbox"/> kilowatt	<input type="checkbox"/> length	<input type="checkbox"/> N/A	<input type="checkbox"/> number
<input checked="" type="checkbox"/> volume	<input type="checkbox"/> weight					

Production Process Step Information For This Production Unit

i. Enter the production process codes to identify the process steps that involve TURA-reportable chemicals as an input, output or throughput. (See the reporting guidance document for the list of production process codes and instructions on when a given code needs to be listed.)

1. <u>BB-02</u> Process Code	2. <u>BB-04</u> Process Code	3. _____ Process Code	4. _____ Process Code
5. _____ Process Code	6. _____ Process Code	7. _____ Process Code	8. _____ Process Code

9. _____ Process Code	10. _____ Process Code	11. _____ Process Code	12. _____ Process Code
13. _____ Process Code	14. _____ Process Code	15. _____ Process Code	16. _____ Process Code
17. _____ Process Code	18. _____ Process Code	19. _____ Process Code	20. _____ Process Code
21. _____ Process Code	22. _____ Process Code	23. _____ Process Code	24. _____ Process Code

List the TURA-reportable chemicals associated with this production unit. If a chemical is associated with ALL the process steps entered in i. above, check ALL. If a chemical is associated with some but not all of the process steps, check the numbers that correspond to the process codes entered in i. above (i.e. box 1 below corresponds to the process code entered in i.1).

j. Production unit number: 01
Prod. Unit #

k. TURA Chemical	<u>766939</u> CAS #	<u>Sulfuric acid</u> Chemical Name
------------------	------------------------	---------------------------------------

Check "All" or the numbers that correspond to the process codes entered in i.

1. <input type="checkbox"/>	2. <input type="checkbox"/>	3. <input type="checkbox"/>	4. <input type="checkbox"/>	5. <input type="checkbox"/>	6. <input type="checkbox"/>	7. <input type="checkbox"/>	8. <input type="checkbox"/>	9. <input type="checkbox"/>	10. <input type="checkbox"/>	11. <input type="checkbox"/>	All. <input checked="" type="checkbox"/>
13. <input type="checkbox"/>	14. <input type="checkbox"/>	15. <input type="checkbox"/>	16. <input type="checkbox"/>	17. <input type="checkbox"/>	18. <input type="checkbox"/>	19. <input type="checkbox"/>	20. <input type="checkbox"/>	21. <input type="checkbox"/>	22. <input type="checkbox"/>	23. <input type="checkbox"/>	12. <input type="checkbox"/>
											24. <input type="checkbox"/>

Reporting Guidance

Information On Identifying Production Units For First Time Filers:

To complete Section 4, you must have identified the production units at your facility in which each listed chemical used. A production unit is the combination of the process (or activities) used to produce a product or service and the product or service.

To identify production units, the facility must obtain a complete understanding of its processes or activities that involve reportable chemicals. In thinking about production processes, facilities typically begin by identifying the basic process, operation, or technology used to make the product. In identifying processes, a facility must be sure to account for such intermittent processes such as equipment cleaning, as well as out-of-process activities such as materials storage and handling.

It may be difficult to break out chemicals that are being used at very low quantities (i.e., dioxin, mercury as an impurity) into a specific production unit, process or product. Selection of a production unit which is the entire facility is acceptable in these cases.

With the exception of the operations listed below which are not considered to be production units, every operation which uses any amount of chemical for which a report is filed must be included in a production unit.

- pilot plants;
- pilot production units;
- start-up production units for either two years from the date of initial operation or until operational efficiency is achieved, whichever time period is shorter; and
- waste treatment units and pollution control equipment.


Please note that the even though these operations are not considered production units, chemical use associated with these operations must be included in the facility-wide totals on the Form S itself.

Please see “Appendix I – Note on Production Units” for more in depth information on defining production units and units of product see:

Explanation of Section 4, Items a through p

For online filers that have reported previously, *Items a – i* which describe the processes used in the production unit and the product produced will be pre-populated will be pre-populated by eDEP. (Manual filers must refer to their prior year reports use the same production units as reported in previous years.) *Items j – o* which describe which chemicals are used in the production unit and the processes in which they are used is not pre-populated because this information may change from year to year.

eDEP will present these questions production unit by production unit. The chemical information section must be filled out entirely for each chemical used in the production unit before you move on to the next production unit.

 **Note: for eDEP filers reporting on chemicals used ONLY in waste treatment:** While waste treatment units are not considered production units, facilities filing electronically will have to create a place holder production unit to complete the Form S. Call that place holder “dummy” but do not assign a number to it.

Items a – i (production unit processes and products)

Because production units are used to track TUR progress over time they must remain consistent from year to year. Repeat filers must use the same production units and production unit numbers as they used in prior years, unless the production unit is no longer in operation or has been dramatically changed. While changes can be made in the descriptive information about a production unit to reflect changes in facility operations, new production units should be created ONLY if:

- the production process has been changed so significantly that the existing definition is no longer appropriate
- the company is producing a new product
- the company has added a new and significantly different production line

Item a: Assign a Production Unit Number.

If this is your first time reporting, assign the number 1 to the first production unit, 2 to the second, etc., and check “Yes” or “No” to indicate if the production unit is new.

Facilities filing through eDEP will find their production units listed sequentially, any new production units will be assigned the next highest sequential number (i.e. previously used highest number was 14, new production unit number will be assigned 15).

Assign a new production unit number (one you have never used before) if: 1) your facility has begun the production of a new product; or 2) your facility has redefined production units by changing the products and/or production processes included in the production unit.

AVOID A COMMON MISTAKE

If you eliminated a production unit, do not re-assign its number to an existing or new production unit.

Item b. Describe the Process

Describe the production process(es) included in the production unit.

Item c. Describe the Product Produced by the Production Unit


Describe the product or family of products produced by the processes (see Appendix H for further guidance) entered in section b. (If you have filed previously use the description as reported in earlier years.)

Items d through g. Enter NAICS codes

List the NAICS code that best represents the product or family of products first, followed by other codes that apply. Enter up to four NAICS codes. NAICS codes are listed in Appendix A.


Item h. Describe the Unit of Product Associated with the Production Unit

A unit of product is a measure of the product outputs or the amount of work produced by a process. If you are a first time filer, please see Appendix I and MassDEP's "Note on Production Units." If you filed previously, you will already have chosen a unit of product for the production unit. Please check the unit of product that applies. Use N/A for waste treatment units.

 **Note:** In most cases, a physical measure will be adequate as a unit of product. Examples of physical measures include number or weight of the product produced.

Item i. Indicate Process Codes to Describe Production Unit

The TURA program has identified a set of process codes to describe the different processing steps that can occur in a production unit. (The complete list of process codes and appropriate definitions can be found in Appendix H). In the space provided, list the appropriate codes for each processing step that takes place in the production unit, in the order in which step occurs. In the rare event that the production unit has more than twenty-four individual processes, note the production unit number on the continuation page and add the additional process codes in the space provided.

 **Note:** At least one process code must be selected for each production unit.

Items j through o. (how chemicals are used in the production unit)

This section provides information on which chemicals are used in the production unit and how they are used. The information is entered one chemical at a time, for each production unit. Once you have entered the information on each chemical used in that production unit move on to the next production unit.

-*Item j* has the number assigned to the production unit for which you are entering data on the chemicals used in the production unit

-*Items k through n* describe for each chemical used in the production process, the individual processes in which the chemical goes through. *Item k* is for the first chemical, *Item l* is for the second chemical and so on. (eDEP will provide another sheet if more than four chemicals are used in the production unit).

For each reportable chemical used in the production unit:

1. Enter the name and CAS number in the appropriate box.
2. Fill in the process step number for each individual production processes in which the chemical is used in the appropriate boxes. If the chemical is used in all of the production processes in the production unit, check the box marked ALL. Otherwise, enter the number assigned to the production process step in *item i*. In the example above, the process code BB-02 is listed first in *item i* and is therefore assigned the number 1. If the chemical you are reporting on is used in BB-02 enter the number 1 in box #1 in *item k*.
3. Move on to the next reportable chemical used in the production unit.

The form has place for four chemicals (*items k through l*). If more than four chemicals are used in the production unit, check the box in item o, note the production unit number on the continuation page and add the additional chemicals in the space provided.

Once this section on chemical use has been completed for each reportable chemical used in the production unit validate the form if you are using eDEP and the next production unit will be presented to you. If you are filing on paper, fill out a new sheet for the next production unit.

When the information has been completed for each production unit proceed to *item p*.

Item p Have additional production units been added to this facility?

Answer yes or no as appropriate.

CHAPTER 3

DETAILED FORM S INSTRUCTIONS

A Form S must be completed for each reportable chemical. The Form S is divided into four sections which include information about each reportable chemical.

In Section 1, facilities provide information on the amount of chemical that is manufactured, processed or otherwise used, the amount produced as byproduct, and the amount shipped in or as product at the facility.

In Section 2, facilities give an explanation if the chemicals reported used are not balanced with the amount shipped in product or generated as byproduct.

In Section 3, facilities indicate whether the chemical is used in waste treatment/pollution control.

In Section 4, facilities provide information on the chemical at the production unit level, information about changes in use and byproduct from the previous year.

To complete the Form S, you should first read EPA's Toxic Chemical Release Inventory Reporting Forms and Instructions. This information will help to fill out the Form S.

Completing Section 1 of the Form S: Facility-Wide Use of Listed Chemical

✓ Example

Section 1: Facility-Wide Use of Listed Chemical

108883

a. CAS #

Toluene

b. Chemical Name (Dioxin should be in grams, decimal points may be used)

Facility-wide use of chemical identified in a. Enter the total amount (in POUNDS, except for dioxin) for each applicable category. **NOTE:** 'Generated as byproduct' (item f.) means all waste containing the listed chemical before the waste is handled, transferred, treated, recycled or released. Please refer to the reporting instructions before completing this section.

c. Manufactured

20000

d. Processed

e. Otherwise Used

2000

f. Generated As Byproduct

18000

g. Shipped In Or As Product

i. Production Ratio

🔊 Reporting Guidance

To complete Section 1 of the Form S, you need to understand the terms, "manufacture," "process," and "otherwise use", "byproduct", and "shipped in or as product".

USE

Use of each chemical is reported as one or combination of the following types of use: "manufacture," "process," and "otherwise use". These terms have the same meaning under TURA as in EPCRA, and are defined below. Consult

EPA's "Toxic Chemical Release Inventory Reporting Forms and Instructions for at <http://www.epa.gov/tri/report/index.htm> for more detailed guidance.

You manufacture a listed chemical if you create it (or cause it to come into being) as a product, impurity or waste. Manufacturing also includes importing the chemical into the United States. Chemicals that are "coincidentally" manufactured during production, fuel combustion, or waste treatment, are considered "manufactured" under TURA and are subject to reporting requirements.

You process a chemical if it is intentionally incorporated into your product. This category includes chemicals used as reactants, performance enhancers or components of a product.

You otherwise use a chemical if your use does not fit the manufacturing or processing categories. "Otherwise Used" is a default category. Examples include use of cleaners, degreasers and coolants to maintain equipment.

AVOID COMMON MISTAKES

- ✓ The same chemical in the same formulation can be considered processed in some circumstances and otherwise used in others. For example, when a solvent is mixed with other substances to make a coating that is sold as a product, the solvent is considered to be processed, since it is being incorporated into a product (the coating). When the company that purchased that coating applies it to another product however, the solvent is considered to be "otherwise used" since it is merely serving as a carrier that will evaporate off, rather than remain in the product.
 - ✓ Chemicals brought on-site but held in inventory, rather than used in a production process during the reporting year, should not be reported in the facility-wide total use
-

BYPRODUCT

Byproduct is defined as: "nonproduct outputs of toxic or hazardous substances generated by a production unit, before handling, transfer, treatment or release. Otherwise used substances shall be counted as byproduct when they leave a production unit." (Byproduct is equivalent to the sum of Part II, Sections 8.1 - 8.8 of the EPA Form R).

Once a chemical is manufactured, processed, or otherwise used, only three things can happen to it:

- It can become a product or a part of one.
- It can be consumed or transformed during the production process.
- It can end up as a "byproduct".

If a chemical does not become a product and it is not consumed or transformed in the production process, as a general rule it is a "byproduct". Generally, byproduct encompasses all of the "non-products" or wastes that leave the production unit.

However, the following are not byproducts:

1. Materials that are reused in a process in their current form without any type of treatment or recovery are not byproducts. They are an input, but their subsequent use is not counted in the amount manufactured, processed, or otherwise used.
2. Any substances that are recycled through a process that is "integral" to the production unit are not byproducts because they never leave the production process (see Appendix G for further guidance on integral recycling).
3. Untreated materials that are shipped off-site for reuse without any type of treatment or recovery are not byproducts but are products.




AVOID A COMMON MISTAKE

When MassDEP reviews the byproduct numbers, MassDEP compares the amount reported in the Form S with the amounts reported in Part II, Section 8 of the Form R. In general, the sum of items 8.1 through 8.8 should equal the amount of byproduct reported in the Form S. (The Form S byproduct number may be slightly different due to the way the numbers are rounded off in the Form R.)

Note:

Explanation of Section 4, Items a through b.

CAS Number and Name: Enter the **chemical abstract service (CAS) number** for the listed chemical from your Form S cover sheet, Section 4. If the chemical is a chemical category, please refer to the CAS # in *The Massachusetts Toxics Use Reduction Act List of Reportable Chemicals for Calendar Year 2011* at

 **Note:** CAS #s are entered without dashes.


Enter the chemical name as it appears on the Form S cover sheet, Section 4.

Explanation of Section 4, Items c through g

Facility-Wide Use of Chemical: Enter the total quantity of the toxic chemical that was manufactured, processed, or otherwise used facility-wide during the calendar year covered by the report. Also enter the total quantity of the chemical generated as byproduct or shipped in or as product. Please refer to Appendix D, Common Reporting Errors, #1

The total quantity is reported in pounds for all chemicals except dioxin and dioxin like chemicals and other pBTs. Dioxins are reported in grams. Other pBTs are reported in half pounds.

Include in these totals chemical use in pilot plants, pilot production units, start-up production units and waste treatment units.

 **Note:** eDEP will only allow the entry of whole pounds for non PBT chemicals, ½ pounds (½ grams for dioxins) are allowed for PBT chemicals.

Explanation of Section 4, Items h through i

Item h is used for eDEP reporting to automatically populate the Form S with information from the Form R/Form A.

Item i Production ratio: Enter the production ratio for this chemical in item i. This is the same production ratio that is reported on the Form R. It is the current year production amounts divided by the previous year's production level. EPA's "Toxic Chemical Release Inventory Reporting Forms and Instructions for at <http://www.epa.gov/tri/report/index.htm> for more detailed guidance on production ratios

Completing Section 2 of the Form S: Materials Balance

Reporting Guidance


MATERIALS BALANCE

In general

Manufactured + Processed + Otherwise Used should equal

Byproduct + Shipped in Product

You can think of the amount of a chemical that is manufactured, processed, or otherwise used as an input. Generally, the byproducts and the amount shipped in product can be viewed as the outputs. Unless a chemical undergoes a chemical reaction during production that transforms it into another substance or substances, the amount of the chemical "used" equals the amount contained in the product plus the amount generated as byproduct. This concept of a "materials balance" is incorporated into the design of the Form S.

 **Note:** eDEP facilities that do not have a mass balance with their chemical use (i.e. manufacture, process or otherwise use do not equal) must respond to at least one of the materials balance options in Section 2. Providing this information will avoid follow up inquiries from MassDEP to ascertain the accuracy of your reported information.

Example

Section 2: Materials Balance

When the amounts reported in c, d and e in Section 1 are added together, the sum will in many cases equal the sum of f and g. In other words, lines c, d and e will often form a "materials balance." If lines c, d and e are not in approximate balance, you must use this section to explain why. Indicate all the reasons that apply by entering the number of pounds on the appropriate line below (e.g., 4,000 Chemical was held in inventory).

a. Chemical Was Recycled On Site

4,000

c. Chemical Was Held in Inventory

b. Chemical Was Consumed or Transformed

d. Chemical Is A Compound

e. Other

f. Did anything non-routine occur at your facility during the reporting year that affected the data reported? Yes ☒* No ☐ *If your answer is Yes, you may explain in Section 4.m on Page 3.

Reporting Guidance

Facilities filing via eDEP whose report does not indicate that there is a mass balance (i.e. manufacture, process or otherwise use do not equal the sum of shipped and byproduct) will receive a validation message in the eDEP system,

asking the filer to double-check the data for errors. eDEP filers will need to respond to at least one of the options in Section 2 to explain why there is not a mass balance. If the answer is "other," please explain in Section 4 of the Form S.

There are circumstances where the amounts in line c, d, and e of Section 1 will not be in balance with lines f and g. Section 2 includes several options to allow facilities to explain why this is so. *It is important to complete this item because it will clarify what might otherwise be considered a reporting error.* Indicate all of the reasons that apply by entering the number of pounds on the appropriate line.

Section 2 lists four of the most common reasons and an "other" category. The four most common reasons are:

1. Chemical was recycled on-site (in a method that is not integral to the production process): With non-integral recycling, the chemical is counted as a byproduct each time it leaves the production unit for recycling. Facilities report as manufactured, processed, or otherwise used only the amount of the chemical newly added during the year. In these cases, the sum of byproduct and shipped in product will exceed the facility's total use and a materials imbalance may result. Please record the quantity of chemical that was recycled on-site, so that the apparent imbalance can be reconciled. (See Appendix G, Integral Recycling Guidance Under the Toxics Use Reduction Act, for further explanation).
2. Product was held in inventory: Year-to-year inventory changes can affect the apparent materials balance. The Form S requires that a facility report the amount of a chemical shipped in or as product during the reporting year. Some products manufactured in one year might not be shipped until the next.
3. Chemical was consumed or transformed: If a chemical is consumed or transformed during production, either partially or totally, the amount generated as byproduct plus the amount shipped in or as product may be less than the amount manufactured, processed or otherwise used.
4. Chemical is a compound: For metals reported as compounds, the total weight of the compound in the amount manufactured, processed or otherwise used is counted. However, only the weight of the parent metal being reported is counted in calculating byproducts. Refer to Appendix F for more information on metals reporting and planning.

In sum if any of these Section 2 reasons are reported , the materials balance equation should be:

MANUFACTURED + PROCESSED + OTHERWISE USED = BYPRODUCT + SHIPPED IN
PRODUCT – RECYCLED ONSITE + CONSUMED OR TRANSFORMED + (if the substance is a chemical
compound) THE WEIGHT OF THE OTHER SUBSTANCES IN THE CHEMICAL COMPOUND

Explanation of Item f

If there was a non-routine occurrence which would affect information in the report, please note that here and report it in Section 4.m. An example of a non-routine occurrence is a major chemical spill that led to an unusual increase in byproducts for the year.



Note: eDEP facilities that check 'yes' for this option will be required to provide an explanation regarding the non-routine occurrence.

Completing Section 3 of the Form S: Chemicals Used in Waste Treatment Units

✓Example

Section 3: Chemicals Used in Waste Treatment Units

a. Is this chemical used to treat waste or control pollution?

☐ Yes

☐ No*

*If your answer is No, please skip ahead to Section 4.

b. Please enter the amount of the chemical (in pounds) used to treat waste or control pollution.

Pounds _____

c. Did the use of this chemical for waste treatment or pollution control increase or decrease by 10 percent or more compared with the previous reporting year?

c.1 ☐ Yes* ☐ No

*If your answer is Yes, you may explain in Section 4.m on Page 3.

c.2 ☐ Yes ☐ No

Are there more chemicals to report? (Use ONLY if ALL chemicals are used to treat waste or control pollution).

Explanation of Section 3, Items a-c

a. Is this chemical used to treat waste or control pollution? If your answer is no, skip to Section 4. If your answer is yes continue to Section b.

b. Enter the amount of the chemical (in pounds) used to treat waste or control pollution.

c.1 Answer whether or not the use of the waste treatment chemical increased or decreased by 10 percent or more since the previous year. If yes provide an explanation in Section 4.m. on page 3 of the Form S.

c.2 Are there more chemicals to report? This question applies only if all of the reportable chemicals used at your facility are used to treat waste or control pollution.

Completing Section 4 of the Form S: Toxics Use by Production Unit

Please refer to Appendix C of the 2011 Toxics Use Reporting Appendices for examples in completing Section 4 of the Form S, Toxics Use by Production Unit. This section is filled out for each production unit in which the chemical being reported on in this Form S is used.

Section 4: Toxics Use by Production Unit

b. Quantity of Chemical Code:

☐ 1. ≤5,000 lbs.

☐ 2. > 5,000 ≤10,000 lbs. ☐ 3. > 10,000 lbs. ≤100,000 lbs.

☐ 4. > 100,000 lbs. ≤500,000 lbs.

☐ 5. > 500,000 lbs.

c. *Did the use of this chemical in this production unit increase or decrease by 10 percent or more compared with the previous reporting year and/or did you implement toxics use reduction?*

☐ Yes ☐ No*

**If your answer is No, skip ahead to g. below.*

Explanation of Section 4, Items 4a through c

In Section 4, you provide information on chemical use and byproduct in a given production unit. You also report your progress in reducing use and byproduct generation. First time filers need only fill out item b. in Section 4.

- a. Enter the production unit number from the Form S Cover Sheet.
- b. Quantity of Chemical Code: Enter the quantity of chemical code to indicate the amount of the toxic substance that was manufactured, processed, or otherwise used in the production unit during the reporting year. Please refer to Appendix G for guidance on determining the quantity of toxic chemical to report if it was integrally or non-integrally recycled.
- c. Change in Use: *Item c* is a screening question designed to determine if you need to complete *items d–f*. Answer yes and proceed to *items d–f* only if the amount of the chemical used in the production unit changed by 10% or more between the current and previous reporting years or you implemented toxics use reduction.

For example, if your 2009 use was 50,000 lbs., then a 10% increase would be equal or greater than 55,000 lbs. (50,000 * 1.1). A 10% decrease would be equal to or less than 45,000 lbs. (50,000 * .9).

If you did not report a chemical in the production unit in the previous year because you either used it below threshold or did not use it at all, you must still complete this question.

If your use of the chemical in the prior year was 0 and you are reporting use of the chemical this year, then check yes for 4.c. and complete *items d–f*.

Process code(s) where most significant changes occurred (up to three in descending order)	Type of Change (Enter "I" for Increase, "D" for Decrease)	Technique Code(s) (up to three per process code)		
d.1. _____	2. _____	3a. _____	3b. _____	3c. _____
e.1. _____	2. _____	3a. _____	3b. _____	3c. _____
f.1. _____	2. _____	3a. _____	3b. _____	3c. _____

Explanation of Section 4, Items 4d-f

Items *d–f* identify the processes in which chemical use changed and the techniques or reasons why the amount of the chemical used in the production unit being reported on changed. Complete this section if your answer to item 4.c is yes (use changed by more than 10%) OR if you implemented TUR.

Use *item d* for the first chemical, *e* for the second etc.

1. List the process codes associated with the chemical use in this production unit in the Form S Cover Sheet (up to three in descending order) in *sections d, e, and f*.
2. Indicate the type of change in chemical use (I for Increase or D for Decrease), and
3. Indicate the applicable technique code/s listed below. You may list up to three techniques per process code. These codes explain what factors caused the increase or decrease in use. If reporting more than one code, enter them in the order of their impact on the change in use, putting the one with the most significant impact first.

Description of Technique or Reason for Change	Technique Code
TUR Techniques	
Input substitution	10
Product reformulation	20
Production unit redesign	30
Production unit modernization	40
Improved operation and maintenance	50
Integral recycling/reuse	60
Waste Minimization	
Byproduct sold in commerce as product	63
Byproduct used in on-site waste treatment	64
Byproduct reused in manufacturing	65
Non-integral on-site recycling	66
Off-site recycling	67
Other Activity	
Production increased	68
Production decreased	69
Reporting threshold was lowered	70
Change in definition of byproduct otherwise used	71
Production/process step outsourced	72
Chemical replaced a more toxic chemical	73
Chemical required by customer or specification	74
Returned to using toxic chemical because safer alternative did not meet technical requirement	75
Returned to using toxic chemical because safer alternative did not meet customer	76

Description of Technique or Reason for Change	Technique Code
preference	
Byproduct increase because of cleanup, decommissioning or spill	77
Improved operation of waste treatment unit	78
Increase due to installation of pollution control device	79
Other	80

g. Was byproduct generated for this chemical less than 1 percent of use in this production unit?

☐ Yes* ☐ No

*If your answer is Yes, skip ahead to l. on Page 3.

Explanation of Section 4, Item g

Item g is a screening question designed to establish whether or not *items h-k* need to be completed. You only need to proceed to *item h* if the amount of byproduct generated in the production unit was equal to or greater than one percent of the amount of the chemical used in the production unit.

For example if you used 15,000 pounds of a chemical in the production unit, you would answer yes and skip to *item l* IF you generated less than 150 pounds of byproduct (15,000* .001). You would answer NO to *item g* and proceed to *item h* if you generated 150 pounds or more of byproduct in that production unit.

h. Did the byproduct generated for this chemical in this production unit increase or decrease by 10 percent or more compared with the previous reporting year and/or did you implement toxics use reduction?

☐ Yes ☐ No*


*If your answer is No, skip ahead to m. on Page 3.


Explanation of Section 4, Item 4h

Item h is a screening question to determine if you need to answer *items i – k*. Answer yes and proceed to *items i – k* only need to be answered if the amount of the chemical generated as byproduct in the production unit changed by 10% or more between the current and previous reporting years or you implemented toxics use reduction.

For example, if your 2009 byproduct was 5,000 lbs., then a 10% increase would be 5,500 lbs. or greater (5,000 * 1.1), or a 10% decrease would be 4,500 lbs. (5,000 * .9) or less.

Complete this item even if you did not report a chemical in the production unit in the previous year because you either used it below threshold or did not use it at all..

 **Note:** If your byproduct from the chemical in the prior year was 0 and there is byproduct in the production unit in the current year then you should check yes for item h. and complete items i through k. because your change in byproduct generation has to be greater than 10%.

 **Note:** If you implemented TUR, you must still provide information in items i through k. even if your decrease is less than 10%.

Process code(s) where most significant changes occurred (up to three in descending order)	Type of Change (Enter "I" for Increase, "D" for Decrease)	Technique Code(s) (up to three per process code)		
i.1.	2.	3a.	3b.	3c.
j.1.	2.	3a.	3b.	3c.
k.1.	2.	3a.	3b.	3c.

Explanation of Section 4, Items i through k

Items i – k identify the processes in which the amount of byproduct generated in the production unit changed and the techniques or reasons why the change occurred. . Complete this section if your answer to item 4.c is yes .(use changed by more than 10%) OR if you implemented TUR.

(Note you do not need to answer this section IF the amount of this chemical generated as byproduct in this production unit is less than 1% of the amount of the chemical used in the production unit)

1. List the process codes associated with the byproduct generation in this production unit in the Form S Cover Sheet (up to three in descending order) in items i, j, and k.
2. Indicate the type of change (I for Increase or D for Decrease), and
3. Indicate the applicable technique code/s (see the chart of technique codes on the following page) . Up to three per process code. These codes explain what factors caused the increase or decrease in byproduct.

l. Are there more production units that use this chemical? ☐ Yes ☐ No

If Yes, add a new production unit in Section a, and follow the same instructions for Sections 4b-k. If No, proceed to Section n.

m. You may add any comments or explanations regarding chemical use and/or byproduct generated in this production unit, chemical use in waste treatment (from Section 3), and non-routine occurrences at your facility (from Section 2).

Explanation of Section 4, Item 4.m

Provide any comments or explanations here regarding:

- chemical use and/or byproduct generated in this production unit,
- chemical use in waste treatment (from Section 3), and
- non-routine (or one-time) occurrences at your facility (from Section 2).
- an explanation of why there is no materials balance in Section 1 of the Form S.

Are there more chemicals to report?

If yes, begin a new Form S for another chemical. If no, then your report is complete.

WHAT IS "TOXICS USE REDUCTION"?

Toxics Use Reduction is defined in the Toxic Use Reduction Act as:

In-plant changes in production processes or raw materials that reduce, avoid, or eliminate the use of toxic or hazardous substances or generation of hazardous byproducts per unit of product, so as to reduce risks to the health of worker, consumers, or the environment without shifting risks between workers, consumers or parts of the environment. Toxic use reduction shall be achieved through any of the following techniques:

Input Substitution is replacing a toxic or hazardous substance or raw material used in a production unit with a non-toxic or less toxic substance. Examples include:

- ☐ Aqueous cleaning instead of solvent cleaning
- ☐ Soy based inks instead of chemical inks
- ☐ Alkaline plating baths instead of cyanide baths

Product Reformulation is substituting for an existing end-product, an end-product which is non-toxic or less toxic upon use, release or disposal. Examples include:

- ☐ Latex based coatings instead of oil based coatings
- ☐ Unbleached paper instead of bleached paper

Production Unit Redesign or Modification is developing and using production units of a different design than those currently used. Examples include:

- ☐ Ozonation instead of chlorine based system for controlling corrosion
- ☐ Electrostatic powder paint spray instead of solvent based paint

Production Unit Modernization is upgrading or replacing existing production unit equipment and methods with other equipment and methods based on the same production unit. Examples include:

- ☐ Continuous closed system instead of batch process
- ☐ Countercurrent and reactive rinsing instead of single tank rinsing in electroplating

Improved Operation and Maintenance of Production Unit Equipment is modifying or adding to existing equipment or methods including, but not limited to, such techniques as improved housekeeping practices, system adjustments, product and process inspections, or production unit control equipment or methods. Examples include:

- ☐ Installation of Floating Roofs on Chemical Storage Tanks (instead of no roofs)
- ☐ Strict inventory controls to prevent expiration of chemicals

Recycling, Reuse, or Extended Use of Toxics is using equipment or methods which become an integral part of the production unit of concern, including but not limited to filtration and other closed loop methods. Examples include:

- ☐ Acid regeneration instead of disposal of acid
- ☐ Silver recycling unit instead of discharge of silver in wastewater

WHAT IS NOT "TOXIC USE REDUCTION"?

Toxics use reduction focuses on the production process, rather than the byproduct. In other words, "reduction" is to occur through changes in the production process, rather than through changes in how the waste generated by the production process is handled. Thus, toxics use reduction does not include any practice which promotes or requires, or which is:

- ☐ Shifting the toxic discharge from one medium to another (air to water);
 - ☐ Recycling, unless it is integral to the production process;
 - ☐ Treatment of toxic waste to make it less toxic or non-toxic; and
 - ☐ Incineration.
-

CHAPTER 4

DETAILED STATE-ONLY FORM R/A INSTRUCTIONS

The State-Only Form R/A must be completed for State-only reportable chemicals and State-only required NAICS Code filers. This form contains a portion of the fields used in the EPA Form R and Form A. When filling out this form, please refer to instructions in EPA's Toxic Chemical Release Inventory Reporting Forms and Instructions, available at <http://www.epa.gov/tri/report/index.htm>.

The State-Only Form R/A is divided into the following sections:

- In Section 1 facilities provide the chemical name and CAS number of the chemical they are reporting.
- Section 2 is for facilities that are eligible for filling out the State-Only Form A.
- There is no Section 3 in the eDEP State-Only Form R/A because this information was already provided on the Form S
- In Section 4 facilities report the maximum amount of chemical onsite at any time during the calendar year.
- In Section 5 facilities report the quantity of toxic chemical entering each environmental media onsite.
- In Section 6 facilities report the quantity of the chemical transferred in wastes to off-site locations.
- In Section 7A, facilities enter codes for on-site waste treatment methods and efficiency.
- In Section 7B, facilities enter codes for on-site energy recovery processes.
- In Section 7C, facilities enter codes for on-site recycling processes.
- In Section 8, facilities report the quantity of toxic chemical released, used in source reduction and recycling activities, and treated. Facilities also provide their production ratio, and the activity codes for their source reduction activities.

Section 1: Toxic Chemical Identity

✓ Example

Section 1 Toxic Chemical Identity

1310732

1.1 CAS Number

Sodium hydroxide

1.2 Toxic Chemical or Chemical Category Name

Please note that MassDEP does not accept the US EPA chemical category identifiers ('N###'); please refer to Appendix B of MassDEP's Toxics Use Reporting Forms and Instructions for the appropriate Massachusetts reporting number for chemical categories).

Are you filing a Form R ☒ yes, continue to Section 4 (note: Sections 2 and 3 are not required for State Only reporting) ☐ no, fill out only the State Only Form A section below.

Explanation of Section 1: Toxic Chemical Identity

☞ **CAS Number and Name:** Enter the **chemical abstract service (CAS) number** for the listed chemical from your Form S cover sheet, Section 4. If the chemical is a chemical category, please refer to the CAS # in *The Massachusetts Toxics Use Reduction Act List of Reportable Chemicals for Calendar Year 2011*. Please note that the CAS number should be entered **without** dashes. Enter the chemical name as it appears on the Form S cover sheet, Section 4.

Check if you are filing a State-Only Form R or Form A.

State Only Form A Section (Section 2)

✓Example

State Only Form A

☒ This chemical meets the Form A filing eligibility criteria (i.e., the annual reporting amount did not exceed 500 pounds this reporting year AND the amount manufactured, processed or otherwise used did not exceed 1 million pounds).

Form A Production Ratio or Activity Index

1.2

Are there additional Form A chemicals to report? ☐ yes (paper filers copy this page as necessary) ☒ no

Explanation of State-Only Form A Section

- Check the first box if your chemical meets the eligibility requirements for filling out a Form A.
- Indicate your facility's production ratio for the reporting year.
- Check if there are additional Form A chemicals to report. Additional pages will be provided by eDEP, as needed. Manual filers must make additional copies of this page.

NOTE: A facility cannot use a Form A if the total of the amounts treated, recycled, disposed, released, used for energy recovery onsite and offsite is less than 500 pounds. These volumes correspond to the sum of amounts reportable for data elements on sections 8.1 (quantity released), 8.2 (quantity used for energy recovery on-site), 8.3 (quantity used for energy recovery off-site), 8.4 (quantity recycled on-site), 8.5 (quantity recycled off-site), 8.6 (quantity treated on-site), and 8.7 (quantity treated off-site). If more than a total of 500 pounds is reported in Section 8, the facility must use a Form R

Section 4: Maximum Amount Stored On-site (note there is no Section 3)

✓Example

Section 4

Enter the maximum amount of the toxic chemical onsite at any time during the calendar year

03

4.1 Two-Digit Code From TRI Instructions Package

Explanation of Section 4: Maximum Amount Stored On-site

Enter the code for the maximum amount of the toxic chemical onsite at any time during the calendar year.

Code	Maximum Pounds of Chemical On Site During Calendar Year
01	0 99
02	100 999
03	1,000 9,999
04	10,000 99,999
05	100,000 999,999
06	1,000,000 9,999,999
07	10,000,000 49,999,999
08	50,000,000 99,999,999
09	100,000,000 499,999,999
10	500,000,000 999,999,999
11	1 billion and above

Section 5: Quantity of Chemical Entering Each Environmental Media On-site

✓Example

Section 5

Quantity of the Toxic Chemical Entering Each Environmental Medium Onsite

5.1-2 Air Emissions ☐ check if not applicable

10

5.1 Fugitive or non-point air emissions
(pounds/year)

120

5.2 Stack or point air emissions (pounds/year)

5.3 Discharges to Receiving Streams or Water Bodies ☒ check if not applicable

Total Release (pounds/year)

5.4 Underground Injection Onsite to Class I or Class II-V wells ☒ check if not applicable

5.4.1 Underground Injection onsite to Class I
Wells (pounds/year)

5.4.2 Underground Injection onsite to Class II-V Wells (pounds/year)

5.5 Disposal to Land Onsite ☐ check if not applicable

5.5.1A RCRA Subtitle C landfills (pounds/year)

5.5.1B Other landfills (pounds/year)

5.5.2 Land treatment/application farming
(pounds/year)

5.5.3 Surface Impoundment (pounds/year)

14000

5.5.4 Other disposal (pounds/year)

Explanation of Section 5: Quantity of Chemical Entering Each Environmental Media On-site

- 5.1-2 Check if your facility did not have air emissions to report.
- 5.1 Enter your facility's fugitive or non-point air emissions in pounds/year.
- 5.2 Enter your facility's stack or point air emissions in pounds/year.
- 5.3 Check if your facility did not have any discharges to receiving streams or water bodies. If your facility did have discharges to receiving streams or water bodies, enter the total release, in pounds/year.
- 5.4 Check if your facility did not have any underground injection onsite to class I or class II-V wells. If your facility did have underground injection onsite to class I or class II-V wells, enter the total amount, in pounds/year.
- 5.5 Check if your facility did not have any disposal to land onsite.
- 5.5.1A Enter your facility's RCRA Subtitle C landfill disposal in pounds/year.
- 5.5.1B Enter your facility's other landfill disposal in pounds/year.
- 5.5.2 Enter your facility's land treatment/application farming disposal in pounds/year.
- 5.5.3 Enter your facility's surface impoundment disposal in pounds/year.
- 5.5.4 Enter your facility's other disposal in pounds/year.

Section 6: Transfer of Wastes to Off-site Locations

✓ Example

Section 6

Transfers of the toxic chemical in wastes to off-site locations

6.1.A Total Quantity Transferred to POTWs ☒ check if not applicable

6.1.A.1 Total Transfers to POTWs

6.2 Transfers to Other Off-site Locations ☐ check if not applicable

20000

6.2.A Total Transfers (pounds/year)

Explanation of Section 6: Transfer of Wastes to Off-site Locations.

6.1A Check the appropriate box if your facility did not have transfers to POTWs to report.

6.1A1 Enter your facility's total transfers to POTWs in pounds/year.

6.2 Check the appropriate box if your facility did not have transfers to other off-site locations to report.

6.2A Enter your facility's total transfers to other off-site locations in pounds/year.

Section 7A: On-site Waste Treatment Methods and Efficiency

✓ Example

Section 7A

On-site Waste Treatment Methods and Efficiency: ☐ check if not applicable

1. General Waste W
Stream Code: 7A.1a

Waste Treatment Method(s) Sequence alpha-numeric codes:

<u>H121</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
7A.1b.2	7A.1b.3	7A.1b.4	7A.1b.5	7A.1b.6	7A.1b.7	7A.1b.8

Waste Treatment Efficiency Estimate: (7A.1c)

- | | | |
|--|--|---|
| <input type="checkbox"/> greater than 99.9999% | <input type="checkbox"/> greater than 99.99% to 99.9999% | <input type="checkbox"/> greater than 99% to 99.99% |
| <input type="checkbox"/> greater than 95% to 99% | <input type="checkbox"/> greater than 50% to 95% | <input type="checkbox"/> greater than 0% to 50% |

Explanation of Section 7A: On-site Waste Treatment Methods and Efficiency

Place a check in the appropriate box if your facility did not have any on-site waste treatment to report.

7A.1a Enter the code for your general waste stream

Code	Waste Stream Type
A	Gaseous (gases, vapors, airborne particulates)
W	Wastewater (aqueous waste)
L	Liquid waste streams (non-aqueous waste)
S	Solid waste streams (including sludges and slurries)

7A1b.1-8 Enter the appropriate waste treatment method sequence alpha-numeric code.

Codes	Waste Treatment Type
A01	Flare
A02	Condenser
A03	Scrubber
A04	Absorber
A05	Electrostatic Precipitator
A06	Mechanical Separation
A07	Other Air Emission Treatment
H040 I	Incineration--thermal destruction other than use as a fuel
H071	Chemical reduction with or without precipitation
H073	Cyanide destruction with or without precipitation
H075	Chemical oxidation
H076	Wet air oxidation
H077	Other chemical precipitation with or without pre-treatment
H081	Biological treatment with or without precipitation
H082	Adsorption
H083	Air or steam stripping
H101	Sludge treatment and/or dewatering
H103	Absorption
H111	Stabilization or chemical fixation prior to disposal
H112	Macro-encapsulation prior to disposal
H121	Neutralization
H122	Evaporation
H123	Settling or clarification
H124	Phase separation
H129	Other treatment

7A.1c Check the estimate range for the efficiency of your system.

Section 7B: On-site Energy Recovery Methods and Efficiency

✓Example

Section 7B

On-Site Energy Recovery Processes ☐ check if not applicable. Energy Recovery Methods [enter 3-character code(s)]

U01

1

2

3

4

Explanation of Section 7B: On-site Energy Recovery Methods and Efficiency

Check the appropriate box if your facility did not have any on-site energy recovery processes to report.

1-4. Enter your energy recovery method 3-character code.

Codes	Energy Recovery Technique
U01	Industrial Kiln
U02	Industrial Furnace
U03	Industrial Boiler

Section 7C: On-site Recycling Processes

✓Example

Section 7C

On-Site Recycling Processes ☐ check if not applicable. Recycling Methods [enter 3-character code(s)]

H10

1

2

3

4

5

6

7

8

9

10

Explanation of Section 7C: On-site Recycling Processes

Check the appropriate box if your facility did not have any on-site recycling processes to report.

1-10. Enter the 3-character recycling method code for your recycling method

Codes	On-Site Recycling Technique
H10	Metal recovery (by retorting, smelting, or chemical or physical extraction)
H20	Solvent recovery (including distillation, evaporation, fractionation or extraction)
H39	Other recovery or reclamation for reuse (including acid regeneration or other chemical reaction process)

Section 8: Source Reduction and Recycling Activities

✓ Example

Section 8	Column A Prior Year (pounds/year)	Column B Current Reporting Year (pounds/year)	Column C Following Year (pounds/year)	Column D Second Following Year (pounds/year)
Source Reduction and Recycling Activities				
8.1a Total on-site disposal: Underground injection and landfills				
8.1b Total other on-site disposal or releases				
8.1c Total off-site disposal: Underground injection and landfills				
8.1d Total other off-site disposal or releases				
8.2 Quantity used for energy recovery onsite				
8.3 Quantity used for energy recovery offsite				
8.4 Quantity recycled onsite	2000	2050	3000	3050
8.5 Quantity recycled offsite	3000	2050	2000	1500
8.6 Quantity treated onsite				
8.7 Quantity treated offsite				
8.8 Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes (pounds/year)			0.92	
8.9 Production Ratio or activity index				
8.10 Did your facility engage in any source reduction activities for this chemical during the reporting year? <input checked="" type="checkbox"/> yes, continue below <input type="checkbox"/> no				
	Source Reduction Activities [enter code(s)]	Methods to Identify Activity (enter codes)		
8.10.1	W13	T04		
		a	b	c
8.10.2		a	b	c
8.10.3		a	b	c
Are there additional State Only Form R chemicals to report? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no (if yes, continue with additional State Only Form Rs as needed)				

Explanation of Section 8: Source Reduction and Recycling Activities

8.1-8.8. Enter, the pounds of the chemical managed in each waste management technique for the prior year and the current year and projections for the following two years.

NOTE: Do not double count. While facilities may dispose of their waste chemicals in several different ways – for example some waste solvents may be released directly to air onsite, and some may be shipped offsite for recycling – each individual pound of chemical has only one final disposition, and should be reported in only one of the eight choices.

8.9 Enter the production ratio for your facility for the reporting year.

8.10 Check the appropriate box for whether or not your facility engaged in source reduction activities during the reporting year.

8.10.1-3 Enter the 3-digit source reduction activity code in the first line

Code	Source Reduction Activity
Good Operating Practices	
W13	Improved maintenance scheduling, record keeping, or procedures
W14	Changed production schedule to minimize equipment and feedstock changeovers
W19	Other changes made in operating practices
Inventory Control	
W21	Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life
W22	Began to test outdated material — continue to use if still effective
W23	Eliminated shelf-life requirements for stable materials
W24	Instituted better labeling procedures
W25	Instituted clearinghouse to exchange materials that would otherwise be discarded
W29	Other changes made in inventory control
Spill and Leak Prevention	
W31	Improved storage or stacking procedures
W32	Improved procedures for loading, unloading, and transfer operations
W33	Installed overflow alarms or automatic shut-off valves
W35	Installed vapor recovery systems
W36	Implemented inspection or monitoring program of potential spill or leak sources
W39	Other changes made in spill and leak prevention
Raw Material Modifications	
W41	Increased purity of raw materials
W42	Substituted raw materials
W49	Other raw material modifications made
Process Modifications	
W51	Instituted re-circulation within a process
W52	Modified equipment, layout, or piping
W53	Used a different process catalyst
W54	Instituted better controls on operating bulk containers to minimize discarding of empty containers
W55	Changed from small volume containers to bulk containers to minimize discarding of empty containers
W58	Other process modifications made
Cleaning and Degreasing	
W59	Modified stripping/cleaning equipment
W60	Changed to mechanical stripping/cleaning devices (from solvents or other materials)
W61	Changed to aqueous cleaners (from solvents or other materials)
W63	Modified containment procedures for cleaning units
W64	Improved draining procedures


Code	Source Reduction Activity
W65	Redesigned parts racks to reduce drag out
W66	Modified or installed rinse systems
W67	Improved rinse equipment design
W68	Improved rinse equipment operation
W71	Other cleaning and degreasing modifications made
Surface Preparation and Finishing	
W72	Modified spray systems or equipment
W73	Substituted coating materials used
W74	Improved application techniques
W75	Changed from spray to other system
W78	Other surface preparation and finishing modifications made
Product Modifications	
W81	Changed product specifications
W82	Modified design or composition of product
W83	Modified packaging
W89	Other product modifications made

Enter the 3-digit code for the method(s) you used to identify these source reduction activities in lines a, b & c.


Code	Method Used to Identify Source Reduction Activity
T01	Internal pollution prevention opportunity audit(s)
T02	External pollution prevention opportunity audit(s)
T03	Materials balance audits
T04	Participative team management
T05	Employee recommendation (independent of a formal company program)
T06	Employee recommendation (under a formal company program)
T07	State government technical assistance program
T08	Federal government technical assistance program
T09	Trade association/industry technical assistance program
T10	Vendor assistance
T11	Other

Are there any additional State only Form R chemicals to report? If you check yes and are an eDEP filer additional forms will be presented to you. If you are filing manually make as many copies of this section as you need.

Toxics Use Fee Worksheet Key

 **Note:** If you are filling out the forms on paper, please fill in the reporting year, facility name, and MassDEP facility ID number in the top right corner of each page. If you are filling out the forms online via eDEP, these items should be pre-populated. Filling out this information ensures that your submittal stays together.

- a. Facility Name. Please enter your facility name.
- b. Facility Street Address. Please enter the street address of your facility.
- c. City. Please enter the town or city where your facility is located.
- d. State. Pre populated. Facility must be located in Massachusetts
- e. Zip. Please enter the zip code for where your facility is located.
- f. Base fee. Please enter your base fee from the table above.
- g. # of Form Ss. Please enter the number of Form Ss you are filing.
- h. Multiply line g by \$1,100. Please enter that amount. Subtract \$1,100 for each lower hazard substance.
- i. Sum of line f and h. Please enter the sum of line f and h.
- j. Fee. Please enter the amount from line i or from the 3rd column of the table (max fee), whichever is less. This is your fee.

 **Note:** If you are filling out these forms online via eDEP, all certification statements, regardless of where they are located in the forms, must be signed at the very end of the submittal.

- k. Authorized Signature. Signature of authorized person at the facility.
- l. Date. Date of signature.

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Commonwealth of Massachusetts
Deval L. Patrick, Governor

Executive Office of Energy and Environmental Affairs
Richard K. Sullivan Jr., Secretary

Department of Environmental Protection
Kenneth L. Kimmell Commissioner